

What is claimed is:

1. An ink jet head comprising:

an actuator formed with a plurality of ink channels and a plurality of nozzles through which ink droplets are ejected, each of the nozzles being fluidly connected to a corresponding one of the ink channels, the plurality of ink channels defining a channel row extending in a first direction;

a manifold attached to the actuator, the manifold being formed with a supply channel; and

a plurality of guides each having at least two opposing surfaces that define a guide channel fluidly connecting the supply channel to a corresponding one of the ink channels, the opposing surfaces facilitating a flow of an air bubble from the supply channel into the ink channel by deforming an outer shape of the air bubble, wherein

each guide channel has an ink channel side and a supply channel side opposite from the ink channel side, and the guide channel has a width in the first direction, the width decreasing with proximity to the ink channel side.

2. The ink jet head according to claim 1, wherein the cross-section of the guide channel has a rectangular shape having a guide width in the first direction and a guide length in a second direction perpendicular to the first direction, the guide length being greater than the guide width, and the ink channel has a rectangular cross-section having a channel width in the first direction and a channel length in the second direction, the channel length being greater than the channel width, wherein a difference between the guide length and the guide width of the guide channel at the supply channel side is smaller than a difference between the channel length and the channel width.

3. The ink jet head according to claim 1, wherein the guide is integrally

formed with the manifold.

4. The ink jet head according to claim 1, wherein:

the actuator includes a substrate having a first substrate surface and a second substrate surface, the first substrate surface being formed with a plurality of grooves; and

the manifold includes a plate member and a manifold member, the plate member having a first plate surface and a second plate surface, the first plate surface being attached to the first substrate surface, thereby defining the plurality of ink channels, the manifold member having a first manifold surface and a second manifold surface, the first manifold surface being formed with a groove and attached to the first plate surface, thereby defining the supply channel, the second manifold surface being attached to the second substrate surface.

5. An ink jet printer comprising:

the ink jet head of claim 1; and

a recovery mechanism that performs at least one of a purging operation and a flushing operation for removing an air bubble from the ink in the supply channel, wherein,

the guide channel facilitates the flow of the air bubble into the ink channel during the at least one of the purging operation and the flushing operation by deforming an outer shape of the air bubble.

6. The ink jet printer according to claim 5, wherein the cross-section of the guide channel has a rectangular shape having a guide width in the first direction and a guide length in a second direction perpendicular to the first direction, the guide length being greater than the guide width, and the ink channel has a rectangular cross-section having a channel width in the first direction and a channel length in the second direction, the channel length being greater than the channel

width, wherein a difference between the guide length and the guide width of the guide channel at the supply channel side is smaller than a difference between the channel length and the channel width.

7. The ink jet printer according to claim 5, wherein the guide is integrally formed with the manifold.

8. The ink jet head according to claim 5, wherein:

the actuator includes a substrate having a first substrate surface and a second substrate surface, the first substrate surface being formed with a plurality of grooves; and

the manifold includes a plate member and a manifold member, the plate member having a first plate surface and a second plate surface, the first plate surface being attached to the first substrate surface, thereby defining the plurality of ink channels, the manifold member having a first manifold surface and a second manifold surface, the first manifold surface being formed with a groove and attached to the first plate surface, thereby defining the supply channel, the second manifold surface being attached to the second substrate surface.